Amendment to the Specification:

Please replace the paragraph starting on p. 5, line 24 and ending on p. 6, line 4 with the following replacement paragraph:

In accordance with an embodiment of the invention, a computer programmed with software (referred to herein as "shot boundary detector") processes a video segment to identify a pair of consecutive frames representing a shot boundary in a video segment. Initially, the shot boundary detector uses a partial block-based comparison technique to determine the amount of change (i.e., a first difference) that occurs within a sequence of frames bordered by a pair of distant (i.e., not consecutive) frames in one embodiment. If the first difference exceeds a first threshold, the shot boundary detector computes an edge difference and/or a color difference between the pair of frames to confirm that a change has occurred. The edge difference reflects a comparison of edges (e.g., borders between different colors) detected in each frame. The color difference reflects a comparison of the colors contained in each frame.

Please replace the paragraph starting on p. 6, line 5 with the following replacement paragraph:

If the change is confirmed, the shot boundary detector uses a ~~step-variable technique~~ binary search to identify two consecutive frames within a sequence of frames bordered by the distant frames that form a shot boundary. For these two consecutive frames, the shot boundary detector uses the partial block-based comparison technique to determine the amount of change (i.e., a second difference) that occurs between the frames. If the ~~partial block-based comparison technique obtains a~~ second difference ~~that~~ exceeds the first threshold, then an abrupt change is detected. If the second difference exceeds a second threshold, then a gradual transition has occurred. ~~Otherwise~~ In addition, the shot boundary detector ~~uses~~ can use the edge and/or color differences to determine whether a gradual transition has occurred.

Please replace the paragraph starting on p. 11, line 15 with the following amended paragraph:

In block 408, the shot boundary detector ~~1130~~ 130 determines whether a candidate flag has been set. The candidate flag is set by the shot boundary detector 130 when it identifies a pair of

frames as being candidates for a shot boundary (i.e., either an abrupt break or a gradual transition). In one embodiment, the candidate flag is set to 1 if a candidate change has been found, and the candidate flat is set to 0 if a candidate change has not been found. Initially, the candidate flag is not set. If the candidate flag has been set, processing continues to block 422, otherwise, processing continues to block 410.

Please replace the paragraph starting on p. 18, line 14 with the following amended paragraph:

In block 420, the shot boundary detector 130 sets a break variable to true if the color difference or edge difference ~~indicate~~ confirms that there is significant change. That is, the break variable is set to true if the color difference or the edge difference ~~confirm~~ confirms that the left and right frames represent a candidate for change.

Please replace the paragraph starting on p. 18, line 24 and ending on p. 19, line 3 with the following amended paragraph:

In block 426, the shot boundary detector 130 determines whether the second difference exceeds the first threshold, which is set to determine whether there is a large difference and which signals an abrupt break. If so, then processing continues to block 428, and the shot boundary detector 130 detects an abrupt break. Block 428 is followed by block 430. In block 430, the shot boundary detector 130 outputs the detected result. Block 430 is followed by block 432. In block 432, the shot boundary detector 130 increments the left and the right frame by half a step. ~~Otherwise~~ Referring back to block 426, if the shot boundary detector 130 determines that the second difference does not exceed the first threshold, processing continues to block 434. In block 434, the shot boundary detector 130 determines whether the ~~edge and/or color~~ second difference exceeds a second threshold or that the break variable is set to true, which is set to determine whether there is a smaller difference than in the case of the abrupt break and which signals a gradual transition. In one embodiment, the second threshold is set at 116. If the ~~edge and/or color~~ second difference exceeds the second threshold or that the break variable is set to true, processing continues to block 436, and the shot boundary detector 130 detects a gradual transition. Block 436 is followed by block 430 described above.

Please replace the paragraph starting on p. 19, line 26 and ending on p. 20, line 12 with the following amended paragraph:

If the frames are not consecutive, processing continues to block 440. In block 440, the shot boundary detector 130 identifies a middle frame between the left frame and right frame. FIG. 5D illustrates a line graph 530 that includes a middle frame 532. The middle frame is in the middle of the portion of video segment bounded by the left and right frames (e.g., middle frame = (left frame + right frame) / 2). In block 442, the shot boundary detector 130 computes the difference between the left frame and the middle frame, which is labeled as DLM, using the partial block-based comparison technique. In block 444, the shot boundary detector 130 computes the difference between the right frame and the middle frame, labeled as DRM, using the partial block-based comparison technique. In block 446, the shot boundary detector 130 determines whether there is a greater difference between the right and middle frames or between the left and middle frames (i.e., whether DRM is greater than DLM). If the difference between the right and middle frames is greater, then the left frame is set to the ~~right~~ middle frame in block 448. Otherwise, the right frame is set to the middle frame in block 450. This helps narrow the range of frames in which the shot boundary may be detected. Then, processing loops back to block 404 to try to identify consecutive frames of a shot boundary.

Please replace the paragraph starting on p. 20, line 13 and ending on p. 21, line 5 with the following amended paragraph:

In block 406, the shot boundary detector performs post-processing. In particular, the shot boundary detector 130 attempts to remove false alarms (i.e., detected shot boundaries that are not actually shot boundaries). In one embodiment, the shot boundary detector 130 checks the length of each shot defined by the detected shot boundaries, and, if the length of a shot is small (e.g., 40-50 frames), then, the shot boundary detector 130 treats the shot boundaries for that shot as a false alarm. The shot boundary frames representing the false alarms are removed from the set of output frames. Moreover, during post-processing, if the camera capturing the frames stores a date and time with each frame, the date and time may be used to confirm each detected shot boundary and remove false alarms. For example, for a given pair of consecutive frames of a shot boundary, if an abrupt break was detected with the first difference exceeding the first threshold by a large amount, the shot

boundary is likely to be an actual shot boundary (i.e., not a false alarm). Likewise, for the pair of consecutive frames of a shot boundary, if a gradual transition was detected with the ~~edge or color~~ second difference exceeding the second threshold by a large amount, the shot boundary is likely to be an actual shot boundary. If the second difference does not exceed a threshold by a large amount, then the shot boundary detector 130 may use the date and/or time of each consecutive frame to determine whether the shot boundary is a false alarm. In one embodiment, if the consecutive frames have different dates (e.g., they were captured on different days) or were captured at different times (e.g., more than 15 minutes apart), they the consecutive frames form a shot boundary. If the consecutive frames were taken on the same day and/or close in time (e.g., one second apart), the consecutive frames are determined to be false alarms by the shot boundary detector 130.